

APPENDIX D

PACKAGING DESIGN CHECKLIST FOR ALL NPD & EXISTING PACKAGING REVIEW

1. Functionality:

Packaging should be designed to meet market and consumer needs while minimising net environmental impact in a cost effective way.

Y/N/Detail

Meet technical performance requirements	Spoilage, Modified Atmosphere Packs, Theft, Shelf-Ready Packaging, Chemical Additives in Packaging Material, Technology Trends	
Meet consumer needs and expectations	Increased Packaging Formats, Tamper Evidence/Hygiene, Special Needs Packaging, Closed Loop Packaging, Role of Packaging in the Marketing Mix, End of Life options, Litter	
Labelling and Symbols to help re-use, recovery and recycling	Labelling, Symbols, Signage, Barcodes/QR Codes & RFID Tags	

2. Resource efficiency:

Packaging should be designed to minimise the use of materials and other resources without compromising product quality and safety and economic viability

NPD Process	Is the packaging necessary?	
	Is the geometry of the container optimised to minimise packaging material?	
	Is the volumetric capacity of the container optimised with the volume of the contents?	
	Is the packaging 'over-engineered' ie uses excessive materials for its requirements?	
	Is it feasible to complement an existing refillable container range?	
	What are the considerations for product integrity/functional requirements for storage?	
	Can this packaging format eliminate the requirement for, or optimise, reusable secondary/tertiary packaging?	
	What are the considerations for product integrity/functional requirements for retail?	
Existing Packaging Review	Is it possible to down gauge material (i.e. lightweighting)?	
	Through product redesign (e.g. concentrates) can packaging be redesigned to use less material?	
	Is it feasible to replace several smaller packages with one larger packaging format?	
	Have suppliers and customers been involved in the design/re-design to find ways to minimise packaging?	
	Can this new packaging format eliminate the requirement for secondary/tertiary packaging?	
	Is the product suited to a bulk re-usable transit packaging system?	

		Y/N/Detail
Minimise materials (source reduction)	Optimise combination of primary, secondary and tertiary packaging.	
Transportation (Supply Chain) Efficiencies	What is the potential for distribution network efficiencies?	
	Maximise shipping space - 'Cubing Out'	
	Have alternative distribution systems been explored for their potential to reduce total packaging system?	
Water & Energy Efficiencies	Do you have a process for monitoring and continuous improvement in place for water?	
	Do you have a process for monitoring and continuous improvement in place for energy?	

3. Low impact materials: Packaging should be designed to minimise the environmental and social impact of materials and components. Materials should be selected incorporating a whole-of-life approach

		Y/N/Detail
Traditional Packaging Materials	Will moving away from these materials result in packaging which is not recoverable through kerbside recycling?	
	Has consideration been given to communicating the benefits of using alternative (non-recyclable) packaging materials?	
Re-usable packaging	Does the infrastructure exist to support collection and re-use?	
	Will this system comply with Health & Safety Regulation including weight restrictions and cleanliness?	
	Is the environmental benefit justified when the entire system is assessed?	
	Is there a potential for secondary re-use if not for original purpose?	
Recyclable Materials	Is the packaging made from a single material or is readily separated?	
	Is the material suitable for collection in the New Zealand context? Are collection and recycling facilities widely available in New Zealand?	
	Will additives, adhesives, coating, inks etc affect the recyclability of the material?	
	Closures, sleeves, carry handles etc - will these need to be removed prior to recycling? If so, are consumers made aware of this?	
Post Consumer Recycled Materials	What is the potential for chemical migration from inks, glues, coatings, or materials used in tracking technology?	
	What consideration has been given to difference in appearance and strength compared to virgin material?	

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Y/N/Detail

Materials from Renewable Sources	What definition of 'renewable sources' are you using?	
	Is the material independently certified to be from renewable resources?	
	Do you understand the manufacturing process of these materials?	
	Do you understand the final disposal options for these materials?	
Degradable Materials	Do you understand the technical characteristics of these materials? Including 'bonded' materials Are they independently verified?	
	If the material is compostable has it been certified to EN13432? Are collection and composting facilities widely available in New Zealand?	
	What steps have been taken to distinguish these materials from 'traditional' plastics to avoid contaminating those recycling streams?	
	Is a closed loop system feasible to avoid material going to landfill?	
Minimise risks associated with potentially toxic and hazardous materials	Do these materials comply with all relevant legislation for both local and export markets?	
	Has consideration been given to the effect these materials will have if discarded in a reckless way?	
	Has consideration been given to the effect these materials will have if they go into a landfill operation which is not designed to prevent breakdown of materials and/or has methane capture technology?	
Locally sourced materials	Is a 'closed loop' system feasible for this material?	
Materials from responsible suppliers	Do you have evidence of supplier commitment to product stewardship principles and/or environmental management systems?	

4. End-of-Life Options: Packaging should be designed to minimise the environmental and social impacts of its disposal

Y/N/Detail

Recovery for Recycling Purposes	Is consultation necessary to provide details on which materials are collected in which region.	
Recovery for Composting Purposes	Does the material meet recognised composting standards, for example EN 13432? Are recycling or composting facilities widely available in New Zealand?	
Energy Recovery	Would the material be suitable for a waste to energy technology providing all other options of re-use and recycling have been exhausted?	
Landfilling	Has consideration been given to the effect these materials will have if they go into a landfill operation where they may degrade aerobically and/or anaerobically?	